

# 6JQ6

## Beam Power Tube with an Integral Diode

9-PIN MINIATURE TYPE

PLATE DISSIPATION = 10 WATTS

DARK HEATER

*For Feedback-Stabilized Vertical Deflection  
Amplifier Applications in Black-and-White and Color TV Receivers*

### ELECTRICAL CHARACTERISTICS

#### Bogey Values

Heater Voltage (AC or DC) . . . . .	$E_h$	6.3	V
Heater Current . . . . .	$I_h$	1.2	A
Direct Interelectrode Capacitances Without external shield			
Grid No.1 to plate . . . . .	$e_{g1-p}$	0.32	pF
Input: G1 to (K, G3+ P <sub>D</sub> , G2, H) . . . . .	$c_i$	13.0	pF
Output: P to (K, G3+ P <sub>D</sub> , G2, H) . . . . .	$c_o$	6.0	pF

*For the following characteristics, see Conditions*

Amplification Factor (Triode Connection) <sup>a</sup> . . . . .	$\mu$	6.5	
Plate Resistance (Approx.) . . . . .	$r_p$	10.5	k $\Omega$
Transconductance . . . . .	$g_m$	4200	$\mu$ mho
DC Plate Current . . . . .	$I_b$	150 <sup>b</sup>	35 mA
DC Grid-No.2 Current . . . . .	$I_{c2}$	20 <sup>b</sup>	2.5 mA
Cutoff DC Grid-No.1 Voltage . . . . .	$E_{c1}(co)$	-37	V
Plate mA = 1			
Instantaneous Diode-Plate-to- Cathode-Voltage Drop for instantaneous diode-plate current ( $r_b(d)$ ) = 2 mA. . . . .	$e_{b(d)}$	5	V

#### Conditions

Heater . . . . .	$E_h$	6.3	6.3	V
DC Plate Voltage . . . . .	$E_b$	40	140	V
DC Grid-No.3 Voltage . . . . .	$E_{c3}$	0	0	V
DC Grid-No.2 Voltage . . . . .	$E_{c2}$	120	140	V
DC Grid-No.1 Voltage . . . . .	$E_{c1}$	0	-18	V

### MECHANICAL CHARACTERISTICS

Operating Position . . . . .	Any
Type of Cathode . . . . .	Coated Unipotential
Dimensional Outline (JEDEC 6-4). . . . .	See General Section
Maximum Overall Length . . . . .	3.062 in (77.77 mm)
Maximum Seated Length . . . . .	2.812 in (71.42 mm)
Maximum Diameter . . . . .	0.875 in (22.22 mm)
Envelope . . . . .	JEDEC Designation T6-1/2
Base . . . . .	Small-Button Noval 9-Pin (JEDEC Designation E9-1)
Terminal Diagram . . . . .	9RA



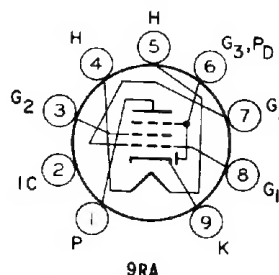
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## TERMINAL DIAGRAM (Bottom View)

Pin 1—Plate  
Pin 2—Do Not Use  
Pin 3—Grid No.2  
Pin 4—Heater  
Pin 5—Heater  
Pin 6—Grid No.3,  
Diode Plate  
Pin 7—Grid No.1  
Pin 8—Grid No.1  
Pin 9—Cathode



## DESIGN-MAXIMUM RATINGS<sup>c</sup>

For operation as a Feedback-Stabilized Vertical-Deflection-Amplifier Tube in Black-&White & Color Television Receivers in a 525-line, 30-frame system

DC Plate Voltage . . . . .	$E_b$	425	V
Peak Positive-Pulse Plate Voltage (Absolute-Maximum Value) <sup>d</sup> . . . . .	$e_{bm}$	2000	V
DC Grid-No.3 & Diode-Plate Voltage. . . . .	$E_{c3}, E_{b(d)}$	+10 -150	V V
DC Grid-No.2 (Screen-Grid) Voltage. . . . .	$E_{c2}$	330	V
Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage . . . . .	$e_{c1m}$	150	V
Heater-Cathode Voltage			
Peak . . . . .	$e_{hkm}$	±200	V
Average <sup>e</sup> . . . . .	$E_{hk(av)}$	100	V
Heater Voltage (AC or DC). . . . .	$E_h$	5.7 to 6.9	V
Cathode Current			
Peak . . . . .	$i_{km}$	250	mA
Average <sup>e</sup> . . . . .	$I_{k(av)}$	70	mA
Average Diode-Plate (& Grid-No.3) Current <sup>e</sup> . . . . .	$I_{b(av)} (d)$	1	mA
Grid-No.2 Input . . . . .	$P_{g2}$	2	W
Plate Dissipation . . . . .	$P_b$	10	W
Envelope Temperature (At hottest point on envelope surface). . . . .	$T_E$	240	°C

## MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance . . . . .	$R_{g1(ckt)}$		
For grid-No.1-resistor-bias operation. . . . .	-	2.2	MΩ
For cathode-bias operation . . . . .	-	2.2	MΩ

<sup>a</sup> With grid No.3 and diode plate connected to cathode and with grid No.2 connected to plate at socket.

<sup>b</sup> This value can be measured by a method involving a recurrent waveform such that the Maximum Ratings of the tube will not be exceeded.

<sup>c</sup> Unless otherwise specified.

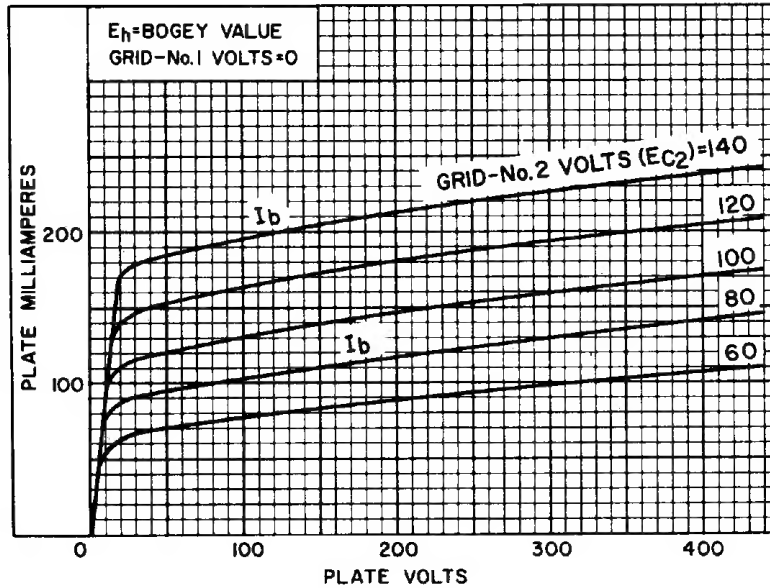
<sup>d</sup> This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 ms.

<sup>e</sup> Measured with a dc meter.

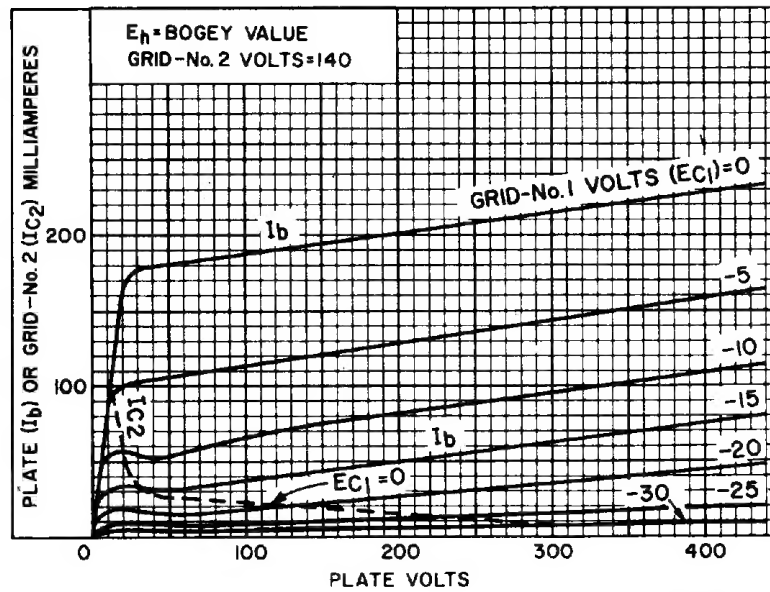


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## Typical Characteristics



92CS-14660



92CS-14661



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